

BELLCOMM, INC.

SUBJECT: Trip Report - Saturn S-II Project
Eleventh Quarterly Review,
February 24, 1966, North American
Aviation, Downey, California

DATE: March 10, 1966

FROM: D. M. Duty

ABSTRACT

The Eleventh Quarterly Review of the Saturn S-II Project was held at North American Aviation (NAA), Downey, California, on February 24, 1966.

The S-II project is presently behind schedule. Activities pacing the program are:

1. Mississippi Test Facility (MTF) activation
2. S-II-T test program at MTF
3. Delay in S-II-1 stage delivery.

Beginning of the S-II-T test program at MTF will be a major milestone. Test results will have a bearing on future program schedules.

(NASA-CR-158203) TRIP REPORT: SATURN S-2
PROJECT ELEVENTH QUARTERLY REVIEW, FEBRUARY
24, 1966, NORTH AMERICAN AVIATION, DOWNEY,
CALIFORNIA (Bellcomm, Inc.) 3 p

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Eleventh Quarterly Review, February 24,
1966, North American Aviation, FROM: D. M. Duty
Downey, California - Case 330

MEMORANDUM FOR FILE

The Eleventh Quarterly Review of the Saturn S-II Project was held at North American Aviation (NAA), Downey, California, on February 24, 1966. Program technical problems and status were discussed by representatives of MSFC and NAA.

The S-II project is presently in a slippage condition which may either increase or decrease depending on the completion of activities such as:

1. Mississippi Test Facility (MTF) activation
2. S-II-T program at MTF
3. S-II-1 stage delivery

Activation of the MTF A2 test stand has experienced problems in GSE integration. Present activity is geared to bringing the GSE to the required configuration. MTF schedules appear optimistic since the GSE and S-II-T stage have not been integrated. Major problems in this area will adversely affect scheduled firing of the S-II-T.

Test objectives of the S-II-T test program at MTF are comprehensive and results from this program may impact the S-II-1 stage. Areas that have been of past concern are:

- (a) Insulation of the LH₂ tank and common bulkhead - this insulation has experienced cracking and will be subjected to LH₂ and LOX environment with S-II-T tanking.

- (b) Propellant depletion sensors - there is a possibility that these sensors are located too low in the tank and would require a manufacturing change.
- (c) Propellant Utilization (PU) computer and programmed mixture ratio - this system has experienced technical problems on the S-II battleship.

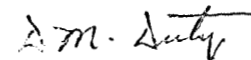
The S-II-1 stage is slipping due to non-delivery of parts. Promise dates on some parts extend into April. Present plans include deferment of work, estimated at 1200 man hours, to MTF. There is a question as to the adequacy of the S-II-1 base heat shield. Tests have indicated higher temperatures than expected in this area.

The present schedule projects the S-II-1 to arrive at MTF June 6; however, under this plan the A2 test stand will not be ready. It appears that until the S-II-T test program has started, firm schedules for S-II-1 delivery to MTF and KSC cannot be made.

The S-II-F stage is scheduled to arrive at KSC March 7. The stack date for the S-IC-F and S-II-F is March 25. NAA has deferred work on the S-II-F, estimated at 371 hours, to KSC.

In summary, the S-II program is approaching a critical milestone in the firing of the S-II-T stage. There are a number of potential problems which may impact program schedules. MSFC and NAA have pinpointed present and potential problems and are working on contingency plans.

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